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ABSTRACT

Traditional perspectives on children's fears and anxiety neither provide satisfying answers to fundamental and important questions nor provide paths to effective clinical intervention. Recently, investigators assessing and treating phobic children by means of active, multi-layered, coping-oriented, temporally extended, and child-centered methods have tended to achieve better results than those who aim at quickly eliminating fear with minimal parent or caretaker collaborative involvement. Although little research has been conducted on very young children who are extremely fearful, the body of literature dealing with observational learning as a treatment for anxious and avoidant patterns is impressive. It appears that disinhibition, new learning, the establishment of positive outcome expectancies, response facilitation, and heightened responsivity to environmental stimuli can result from children's simply observing other children acting successfully in phobic situations. Investigators have also begun to explore anxiety-related thoughts and images, as well as self-regulatory processes in the acquisition, maintenance, and modification of children's fears. Studies that use cognitive-behavioral treatment packages involving both fearful children and their parents represent important steps toward the expansion of clinical fear paradigms. While these approaches are promising, critical issues remain to be addressed, including the improvement of research designs testing effects of clinical interventions and consideration of risks and limitations of self-instructional and related mediational interventions. (RH)

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Recent Advances in the Treatment of Anxiety in Children

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Anxiety reduction in children is a topic whose importance was established early in the history of clinical intervention (e.g., Freud's case of Little Hans), and is one that continues to generate activity and debate among therapists of varied theoretical persuasions. The debates have centered around classificatory ambiguities, diverse etiological hypotheses, divergences in measurement levels and operations, and the question of whether children's anxieties or phobias are persistent or "serious" enough to require treatment (Barrios, Hartmann & Shigetomi, 1981). However, because the extremes of mood and the avoidance patterns manifested by so-called "phobic" children are often enduring and can be detrimental to their health and social adjustment (as in the case of school phobias, social anxieties, and fear of medical/dental procedures), the quest for solutions continues to occupy the attention of clinical investigators. What are we treating?

Foremost among the avenues to progress in the alleviation of children's fears is the re-examination of descriptive and causal models of clinical anxiety. Until very recently, various mechanistic perspectives have been preeminent. Two-factor theory (e.g., Mowrer, 1939), for example, has implicated Pavlovian associative mechanisms in the acquisition of a child's aversion to a "neutral stimulus", such as a dog, and operant mechanisms in the maintenance of acquired fears, to the extent that successful physical avoidance of the feared object reinforces the act of withdrawal and effectively prevents extinction. Psychodynamic theory attributes defensive avoidance and fear to a more distal and ambiguous intrapsychic tension operating in the context of a child's "ego insufficiency" (Compton, 1980).

Neither theory, however, provides satisfying answers to such questions as how to distinguish adaptive from maladaptive fears, why most children overcome their fears without treatment, why some stimuli or situations are more likely than others to lead to phobic reactions, or why there is often a discordance between fear and avoidance as well as a desynchrony among the cognitive, behavioral, and affective-physiological components of anxiety.

Even more discrediting to the traditional models of anxiety is the fact that the course of fear reduction does not appear to follow the pathways suggested by theory. A fear acquired via respondent conditioning should respond to counterconditioning or desensitization. Yet when Graziano, DeGiovanni and Garcia (1979) examined both the case study and controlled experiment literature they concluded that "there exists no convincing evidence that approaches developed on respondent-based systematic desensitization or operant contingency management paradigms are effective methodologies for reducing children's fears" (p. 824). While the poor quality of the research on the deconditioning of children's fears (cf., Hatzenbuehler & Schroeder, 1978) prevents any firm conclusions about the utility of the respondent model per se, the better controlled operant studies fail to provide overwhelming evidence that children can be shaped and/or differentially reinforced to perform fearlessly in a previously "phobic" context for any reasonable length of time after treatment (cf., Johnson & Melamed, 1979; Phillips & Ray, 1980; Ross, 1981). Even the major predictions from Rachman's (1978) revised conditioning theory (wherein a vicarious or indirect mode of fear acquisition is posited) do not appear supported--as Ost and Hugdahl (1981) found that persons with so-called conditioned phobias did not show enhanced physiological and behavioral responding relative to those with indirectly acquired fears, nor did they

appear to have clearly more severe fears than those in the "indirect acquisition" group.

In short, those investigators attempting to assess and treat phobic children by means of active, multilayered, coping-oriented, temporally-extended, and child-centered methods have tended to achieve better results than those who have relied upon the passive exposure of children to a unidimensional intervention aimed at simply eliminating fear as quickly as possible and with minimal collaborative involvement of children or their caretakers. What the behavioral revolution wrought by way of rigor has been at the price of clinical depth and verisimilitude

It appears that we may now be more receptive to the overlooked insights of earlier generations of researchers. For example, Bandura (1969) and Herrnstein (1969) were questioning the adequacy of two-factor theory over a decade ago. Similarly, the pioneering work of Lovick Miller, Curtis Barrett, and their colleagues at the Louisville School of Medicine (e.g., Hampe, Noble, Miller & Barrett, 1973) long ago highlighted what was then termed a "general psychotherapy factor" or "morale" as an essential ingredient in the long-term success of treatment directed at children's fears. Carroll Izard and his colleagues (Buechler & Izard, 1980; Izard & Tompkins, 1966) have attempted to place children's anxiety in an adaptive context, related to individual goals, values, life settings, and challenges and have tied it to particular patterns of socialization as well as to developmental attainments. The contemporary interest in cognitive and self-control interventions, self-efficacy, and developmental relevancies would suggest that, after six decades of study, the analysis and therapy of children's fears is coming of age. How well the current research captures the dynamic and multifaceted nature of anxiety and its contextual

embeddedness is a question to which I shall now turn.

Modeling Approaches

Despite a paucity of research on extremely fearful and very young children, the body of literature dealing with observational learning as a treatment for anxious and avoidant patterns is, relatively speaking, the most impressive (Graziano et al, 1979; Johnson & Melamed, 1979; Phillips & Ray, 1980; Ross, 1981). Observational methods, especially participant modeling of skillful peers, offer the possibility of tapping a number of therapeutic dimensions. Disinhibition, new learning, the establishment of positive outcome expectancies, response facilitation, and heightened responsivity to environmental stimuli can result from the mere observation of other children acting successfully in phobic situations. Participant modeling allows for the additional therapeutic influences of in vivo desensitization, reinforced practice, and the build-up of self-efficacy expectations (Bandura, 1977).

A related development in fear treatment research has been the growing interest in discrete, intense, and "reality-based" anxiety and avoidance reactions. The term "phobia" implies an irrational, disproportionate fear response to a supposedly harmless stimulus. Yet dogs can bite, cats may scratch, going to school can involve intimidating encounters with peers and teachers, and dentists and doctors often deal in unfamiliar procedures that can produce discomfort and pain. The recognition that few fears are totally irrational has brought with it a deeper respect for the plight of children and a dampening of clinical enthusiasm for such simplistic "corrective experiences" as might be pursued via deconditioning or forced exposure techniques. Modeling is a complex multileveled procedure that is well suited to be directed at the subjective as well as the overt behavioral

manifestations of children's rational fears.

A large, and often unheralded, body of clinical work has addressed children's dental anxieties via observational learning methods. Dental anxiety is particularly interesting because it can be traced to parental attitudes (Gershen, 1976) and the demeanor and communication style of the dentist during the initial dental visit (Chambers, 1976), and, if unchecked, it can have long-term deleterious effects not only on oral hygiene habits and attitudes but general medical compliance as well. The dental situation also affords an excellent opportunity for the psychological analysis of the complex relationship between [illegible] anxiety, the comparative effectiveness of psychotropic medication versus psychosocial intervention, the study of individual differences and demographics, as well as the design of preventive interventions for children's fears (Kleinknecht, Klepac, & Bernstein, 1976).

Barbara Melamed and her colleagues have conducted programmatic studies of the influence of filmed models on young children's dental treatment behavior (e.g., Melamed, 1976; Melamed, Hawes, Heiby, & Glick, 1975; Melamed, Weinstein, Hawes, & Katin-Borland, 1975). Noteworthy also have been the careful, multielement assessments employed by Melamed and her collaborators.

For example, Melamed (1976) reported an experiment in which youngsters between the ages of four and eleven were shown a videotape prior to a restorative dental treatment session. Among the variables examined were use of a peer model versus exposure to an adult demonstration, the extent of the observer's previous experiences with dental restoration, and the amount of specific information about the dental visit provided via the videotape. Questionnaire data about the children's dental anxiety were provided by the

children and their parents. Independent observers rated the children's anxiety and disruptiveness as did the dentist. A fear thermometer and a palmar sweat index were also employed at several points across three dental visits, both pre- and post-exposure to the experimental videotapes or a control film.

Melamed (1976) showed that: (1) correlations within anxiety components (behavioral, somatic, and self-report) were significant, whereas correlations between components were low; (2) previous firsthand experience with dental restoration did not reduce the impact of the videotape presentation; (3) the group viewing a peer model were less disruptive during actual treatment than the group viewing a "familiarization" tape with no child present; and (4) the amount of information conveyed on the tape influenced children's subjective report of anxiety, with those children viewing the longer, more informative tape being less anxious than those viewing the shorter version.

Among the clinical advantages of modeling procedures is their relatively low cost (both monetarily and in terms of staff time) and their ease of integration into the normal routine of pediatric dental care.

Cognitive/Self-Control Approaches

Partly as a result of the success of a mediational paradigm such as observational learning and the current renaissance in cognitive applications to clinical problems (cf., Karoly & Kanfer, 1982; Mahoney, 1974; Meichenbaum, 1977) investigators have begun to explore anxiety-related thoughts (and images) and self-regulatory processes in the acquisition, maintenance, and modification of children's fears.

The success of Kanfer, Karoly, and Newman's (1975) analogue investigation of a verbal mediation, self-control paradigm for treating

children's fear of the dark, along with several earlier case reports, prompted Graziano and Mooney (1980) to undertake the first controlled experimental test of a multielement training program, including self-control interventions, with children having clinically severe nighttime fears. In this important and timely study, the investigators recruited 33 families of severely fearful children by means of a newspaper ad and a telephone screening procedure. The 17 children in the experimental and the 16 in the control group had experienced nighttime fears for an average of five years--far in excess of the two year period suggested by Hampe, Noble, Miller and Barrett (1973) as the window for spontaneous remission. The bedtime fears of the two groups were also quite intense and disruptive, and the parents of these children had previously attempted many different interventions.

The children and their families were randomly assigned to either an immediate treatment or waiting list control group. Note that the investigators, interested in the durability and generalization of learning, designed interventions for both the fearful children and their parents. The children's meetings involved training in muscle relaxation, positive imagery, and self-instruction. Children also self-monitored their night-by-night progress toward fear control. The training was administered in three weekly group meetings. The parents were trained to assist their children at home by promoting, supervising, and rewarding the nightly practice. Verbal and token rewards ("bravery tokens") were used. Parents kept a written record of their child's progress and, after the child met a five-point behavioral criterion of "fearless nightime behavior" for 10 consecutive nights, permitted the "cashing in" of bravery tokens for a McDonald's hamburger party.

On the basis of several pre-and post-treatment measures, including home observations of the number of minutes to fall asleep, avoidance and delay tactics such as arguing or asking for a drink of water, getting out of bed, etc. and parental ratings of fear strength and family disruption, the authors argued that the experimental group displayed significantly less nighttime fear behavior as compared to the waiting list controls. Further, 2-, 6-, and 12-month telephone follow-ups suggested that fearlessness had generally been maintained or had improved.

Peterson and Shigetomi (1981) used a package of general "coping skills" training similar to that employed by Graziano and Mooney (1980) in order to reduce children's fear reactions to elective tonsillectomies. The treatment target in this experiment could be considered more of a "rational fear" than darkness phobia, and the target group was considerably younger (average age = 5.47 years) than Graziano and Mooney's subjects (average age = 9.35 years). Unlike Graziano and Mooney, Peterson and Shigetomi (1981) sought to compare their "coping" procedures (including muscle relaxation, distracting mental imagery, and comforting self-talk) with a filmed modeling presentation, an informational procedure, and a combination of coping training and filmed modeling (which was hypothesized to be the most effective of the four experimental treatments). These investigators reasoned that the potency of modeling procedures and of direct information about hospitalization would be enhanced by the provision of skills to help children better control their emotions, thoughts, and behaviors.

On the basis of a comprehensive battery of self-report, observational, and physiological assessment devices, Peterson and Shigetomi (1981) reported marginally significant, but consistent, results in favor of the coping preparation as a means of reducing the distress of hospitalization.

Parental reports uniformly favored the coping treatment.

Although the necessary and sufficient therapeutic ingredients cannot be discerned from either the Graziano and Mooney (1980) or the Peterson and Shigetomi (1981) studies, and the self-control/coping methods may involve confounds due to parental attention, experimenter expectancies, or treatment complexity, these initial studies of cognitive-behavioral treatment packages involving both fearful children and their parents represent important steps toward the expansion of clinical fear paradigms.

Critique

The data thus far collected within a cognitive-behavioral or mediationist perspective would probably not be enough to convince skeptics that a significant advance in the understanding and treatment of children's anxiety has indeed occurred (cf., Ross, 1981). Practicing clinicians would doubtless view the "complex treatment packages" detailed in the literature as still too narrowly conceived and rigidly operationalized to reflect what is done or what can be done in the home, school, or consulting room. Yet, it may be sufficient that, in recent years, clinical investigators have expanded their interventive horizons, accepting the challenge of conducting complex research on complex problems. This reviewer applauds the directions in which the literature has moved--but also feels that a number of critical issues remain to be addressed. Among the more pressing needs of the field are the following:

(a) the need to improve research designs purporting to test the effects of various clinical interventions. The length of most treatments has been brief--perhaps too brief to provide an adequate evaluation of their therapeutic potential. Most treatments have been conducted by graduate and undergraduate students, sometimes ill-equipped to assist

children except by the rote application of procedures taken from a rudimentary "treatment manual". Comparisons with waiting list or no treatment groups do not rule out the effects of attention and expectancy. Follow-up evaluation has been either non-existent or confined to telephone contacts with parents. Attempts should be made to employ follow-up intervals that have been empirically related to the likelihood of spontaneous remission of fear and to employ follow-up procedures that maintain the same conditions of measurement as in the pre-and post-treatment observations (Mash & Terdal, 1980).

(b) the need to consider the potential risks and the inherent limitations of self-instructional or related mediational interventions, particularly as they interact with the special characteristics of children. Fox and Houston (1981) reported an experiment in which a self-statement treatment was designed to assist fourth-graders to deal with performance anxiety associated with reciting a memorized poem while being videotaped. These investigators found that the self-instructional training resulted in subjects' exhibiting greater signs of behavioral anxiety and recitation of the poem in a more pressured (hurried) fashion as compared with a minimal treatment and a no treatment control group. Fox and Houston (1981) speculated that the self-instructions might have served a distracting function or that the negative tone of the self-statements ("Doing this poem in front of others won't be so unpleasant") may have sensitized the children. These appear to be reasonable possibilities. This study underscores the need to assess the complex role of cognition in children's fears prior to designing an "all-purpose" cognitive intervention. Some youngsters think unrealistically about what they believe is a potentially dangerous situation. Training these children to evaluate their thinking

patterns (to imaginally test different hypotheses and behavior-outcome sequences) may be much more helpful then trying to convince them to simply think differently in a fearful context. In this case, self-instructions may be too simplistic a treatment. On the other hand, some youngsters don't think, or cannot manage to think in an integrated fashion, or they think in an automatic, obsessional manner (like the person instructed not to think of a green elephant) because of intense fear conditioning. For these children, the "pathology" is not in their level of general competence, their verbal skills, or their ability to learn. The problem is motivational, in that mindless fear leads to disorganized performance and/or maladaptive avoidance. For such children, self-instructions may not be simplistic enough as an effective intervention. That is, a first line of treatment may need to be directed at enabling the child to relax sufficiently to be able to think at all. Furthermore, we must not overlook the possibility that children with fearful or negative thoughts about various circumstances do not think very long, deeply, or frequently about what frightens them (such as about reciting a poem in front of a videotape camera because "some students at the university are going to look at the films...and judge you on how well they think you did"). Training children to repeat reasons why they shouldn't be afraid can provide an excellent vehicle for stimulating the children to invent reasons why they should.

A good rule of thumb for those who would conduct therapeutic work with children is to talk with them for awhile first. In the pilot study for the Kanfer, Karoly, and Newman (1975) experiment, for example, we initially planned to ask children to say "I am a big boy (or girl) and I can take care of myself in the dark". However, one of our first subjects politely pointed out to us that she was not big. In retrospect, we really should have made that youngster a co-author.

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